

Report on Results

Way To Go, Seattle

**Comparisons between the Spring 2001 and Fall 2002
'One-Less-Car' Demonstration Study**

July 2003



Jemae Hoffman, Mobility Manager
Policy, Planning, and Major Projects Division

Seattle Department of Transportation



City of Seattle

Table of Contents¹

2001 Basic Graphs of Transportation Mode Use	2
2002 Graphs of Various Transportation Relationships and Comparisons.....	3
2001 Graphs of Various Transportation Relationships and Comparisons.....	4
2002 Graphs of Various Transportation Relationships and Comparisons.....	5
2001 'Low-Occupancy Vehicle' Usage Compared	6
2002 Total Miles Traveled by All SOV Modes	7
2001 Average Mode Usage: Baseline vs. Test Period, All Modes	8
2002 All Mode Usage, Baseline vs. Test Period	9
2001 Average Mode Usage: Baseline vs. Test Period, Owned Vehicles	10
2002 Average Mode Usage: Baseline vs. Test Period, Owned Vehicles	11
2001 Average Mode Usage: Baseline vs. Test Period, Alternate Modes	12
2002 Average Mode Usage: Baseline vs. Test Period, Alternate Modes	13
2001 Same Places, Different Ways - Baseline vs. Test Period.....	16
2002 Same Places, Different Ways - Baseline vs. Test Period.....	17
2001 All Participants - Baseline vs. Test Period	18
2002 All Participants - Baseline vs. Test Period	19

¹ The charts in this document were compiled from the following two sources: **Way to Go, Seattle** Report on Results 2001 and **Way to Go, Seattle** Report on Results 2002. Please refer to these source documents for context and details of analyses.

2001 Basic Graphs of Transportation Mode Use

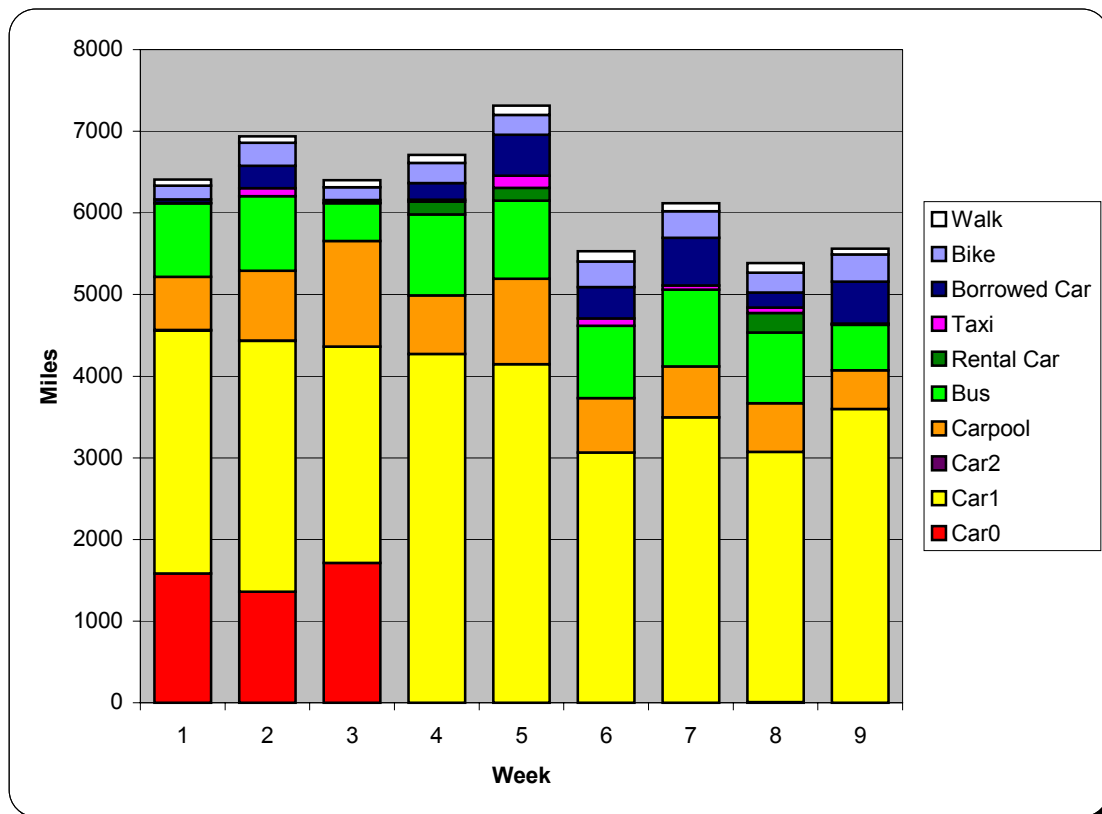


Figure 1: Miles Traveled: All Modes, (All Participants)

All transportation modes recorded in the study are reflected in the above graph. The miles shown on the 'Y' axis represent the total miles traveled by all participants during the week. A recurring issue in the analysis is why overall travel increased in weeks 4 and 5, before the end of school and after participants gave up one of their cars, yet it didn't increase by car. Note; there was one household with a car 2, but it was only driven 8 miles during the entire nine-week period.

2002 Graphs of Various Transportation Relationships and Comparisons

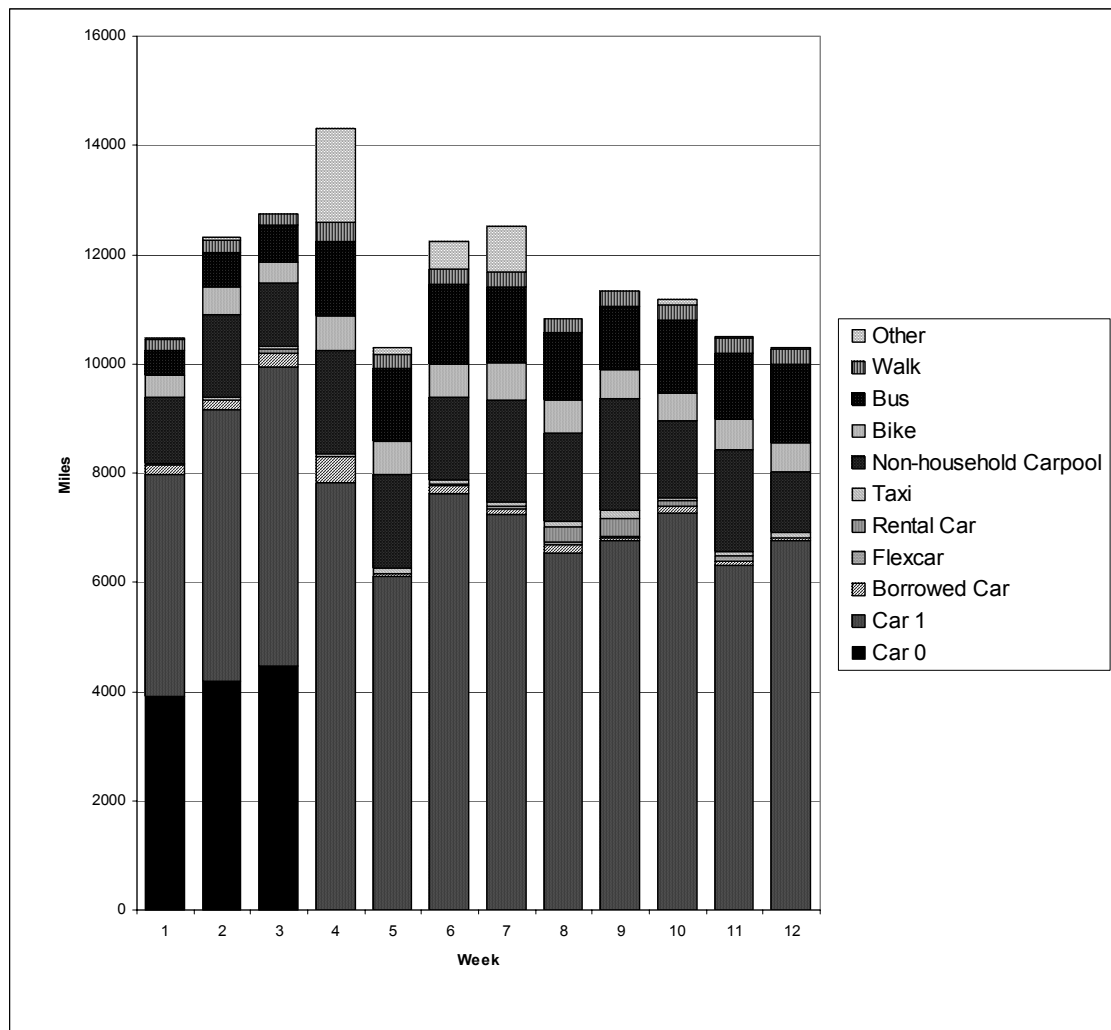


Figure 1: Miles Traveled, All Modes

Figure 1 shows a summary of transportation choices throughout the study. The transition from the baseline period (weeks 1 through 3) to the test period (weeks 4 through 12) can clearly be seen: Although Car 0 is removed after week 3, total miles traveled by all modes do not decrease -- in fact, the first week of the test period was the most heavily traveled week of the study. However, total miles driven by single occupant vehicles (Car 0, Car 1, Borrowed Car, Flexcar, Rental Car) of all types do decrease in the test period compared to the baseline. Figure 1 shows that the participants shifted much of their Car 0 travel to Car 1. Bus utilization also increased in the test period. The remaining modes of transportation show no clear change. "Other" was used by participants to track miles traveled by modes of transportation that are not specifically denoted, e.g. ferry rides. See David Hamilton's travel log on 11/14/02 for an example.

2001 Graphs of Various Transportation Relationships and Comparisons

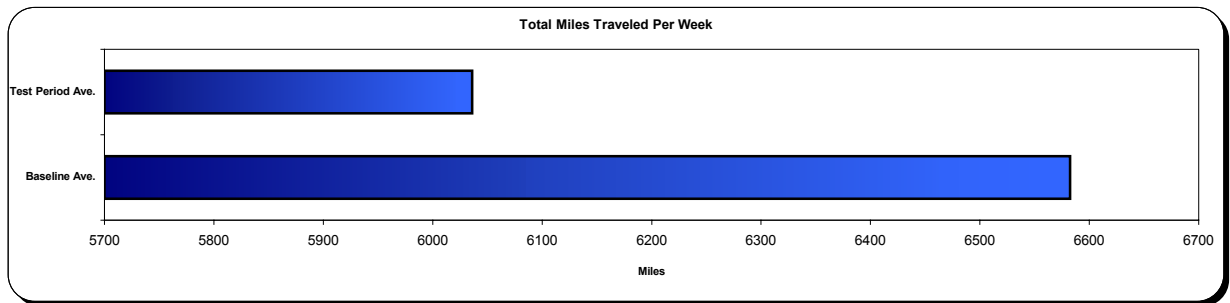


Figure 10: Total Weekly Miles Traveled, Baseline Average vs. Test Period Average, (All Participants)

Participants traveled a weekly average of 6,583 miles during the baseline period and a weekly average of 6,104 during the test weeks (weeks 4-9). The difference of 479 miles represents roughly a 7.3% decrease in total miles traveled. This general summary, however, hides interesting behavioral changes that can be seen in an analysis of the individual weekly totals. (See Figure 11)

2002 Graphs of Various Transportation Relationships and Comparisons

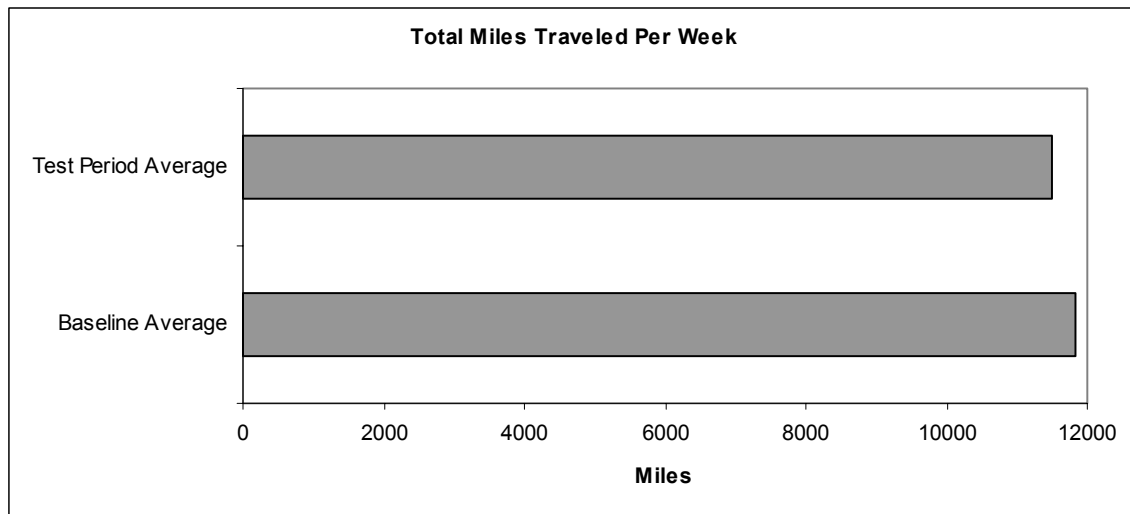


Figure 12: Miles Traveled per Week by All Modes, Baseline vs. Test Period

The chart above shows average weekly miles traveled by all modes. As you can see, there is virtually no reduction in the miles traveled per week in the test period as compared to the baseline, which means people continued to make all their same trips but used non-single occupant vehicle modes (SOV) more heavily. A decrease in total travel would be expected after the loss of the primary car, but participants' total travel decreased by only 3% when Car 0 was removed.

2001 'Low-Occupancy Vehicle' Usage Compared

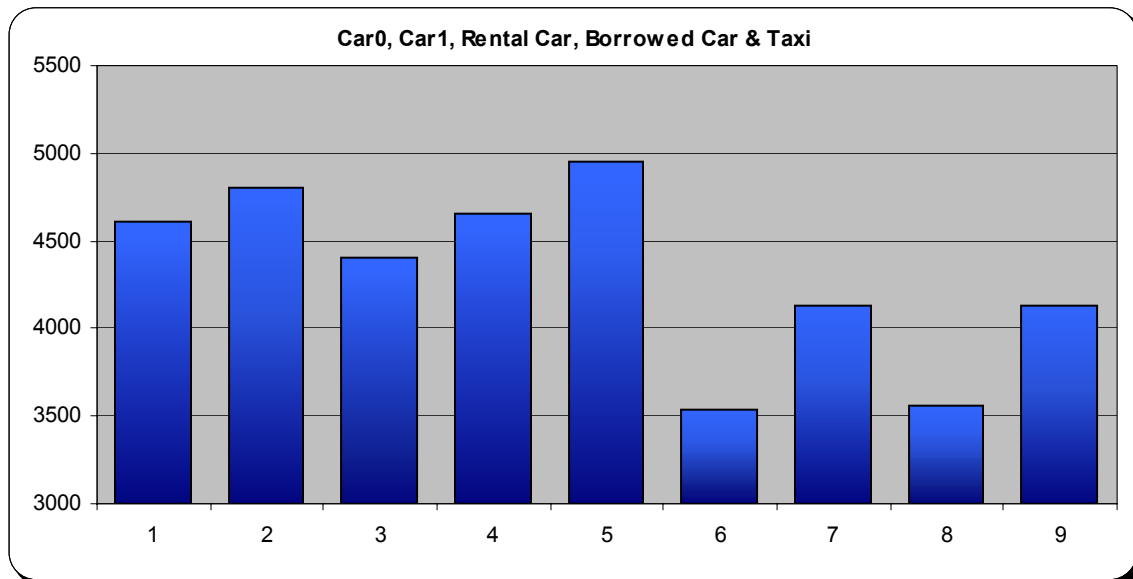


Figure 13: 'Low-Occupancy Vehicle' Usage Compared, (All Participants)

For reasons unknown at this point, the participants actually increased their overall use of low occupancy vehicles during the first two weeks of the test period, (weeks 4 and 5). But even with this unexplained variation, the figure graphically demonstrates there was an overall beneficial decrease in the number of low-occupancy vehicle miles traveled, especially in weeks 6 - 9. Arguably the decrease was made up by the increased use of high occupancy vehicles, (carpools and busses), alternative 'green' modes of transportation such as walking and bicycling, and/or a decrease in the total miles traveled by the participants.

2002 Total Miles Traveled by All SOV Modes

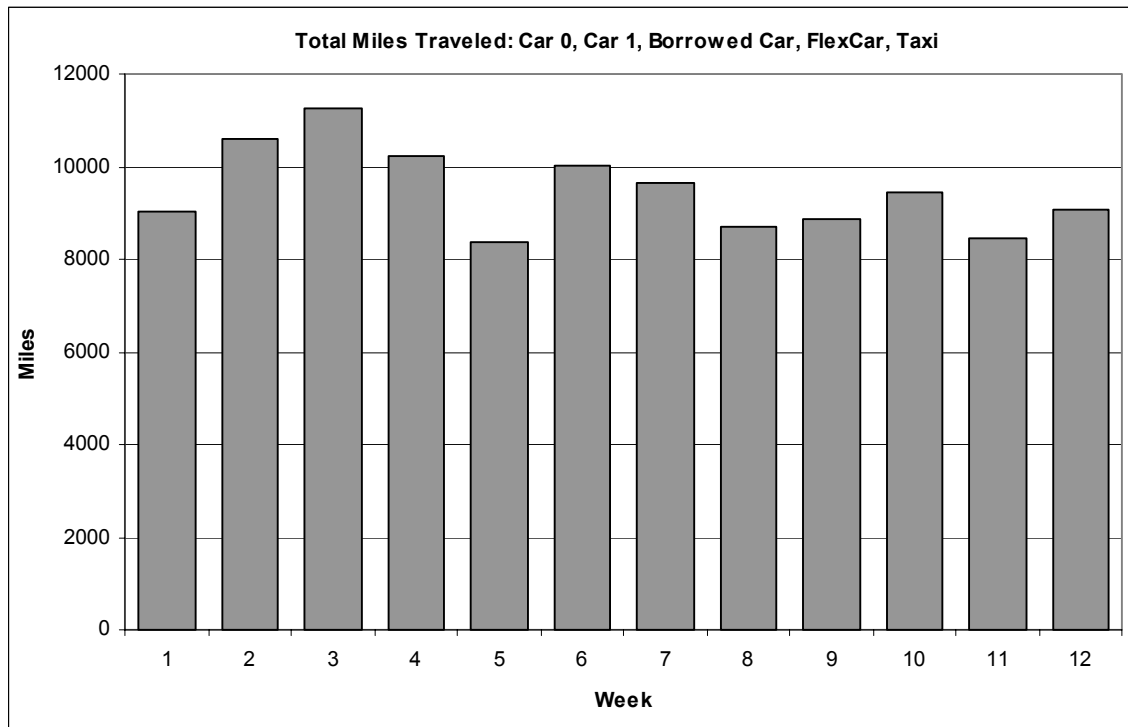


Figure 15: Total Miles Traveled by All SOV Modes

Total SOV automotive transportation (Car 0, Car 1, Borrowed Car, Flexcar, Taxi) is not very different from transportation by Car 0 and Car 1, due to the fact that the relative number of miles traveled by borrowed cars, Flexcar, and taxis are very small compared to the miles traveled in owned vehicles. Overall, all SOV usage dropped from 227 miles per week per household to 177 miles per week per household – a 22% decrease.

2001 Average Mode Usage: Baseline vs. Test Period, All Modes

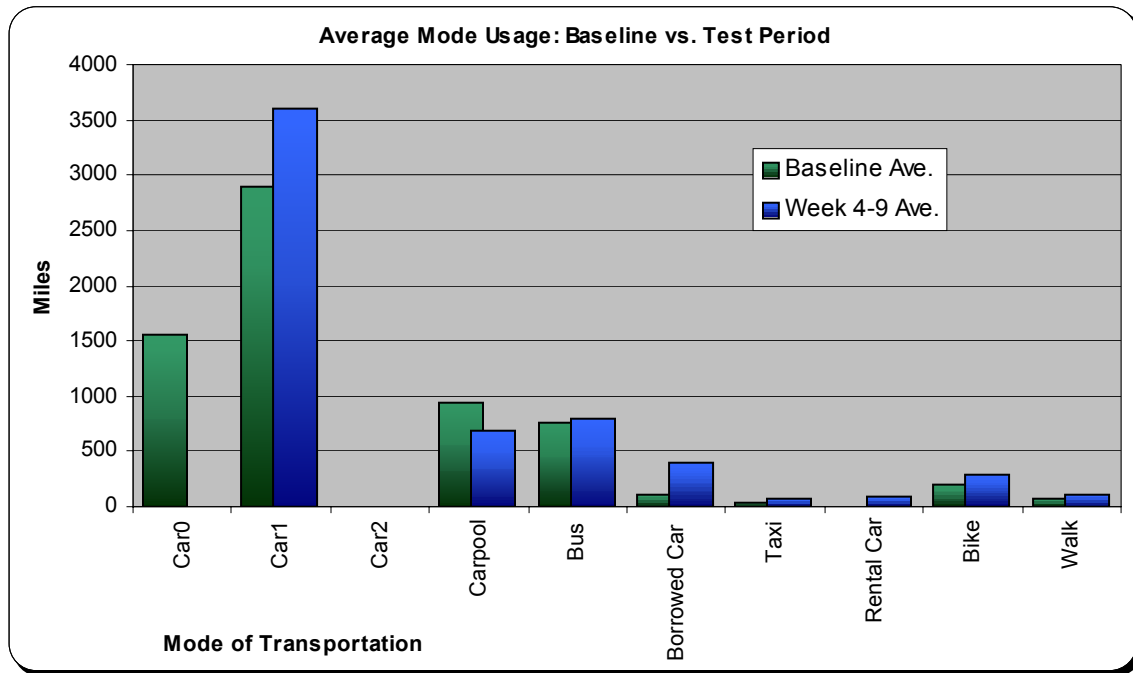


Figure 14: Average Mode Usage: Baseline vs. Test Period, (All Modes - All Participants)

The above graph compares the average weekly miles traveled for each travel mode during the baseline period and the test period.

2002 All Mode Usage, Baseline vs. Test Period

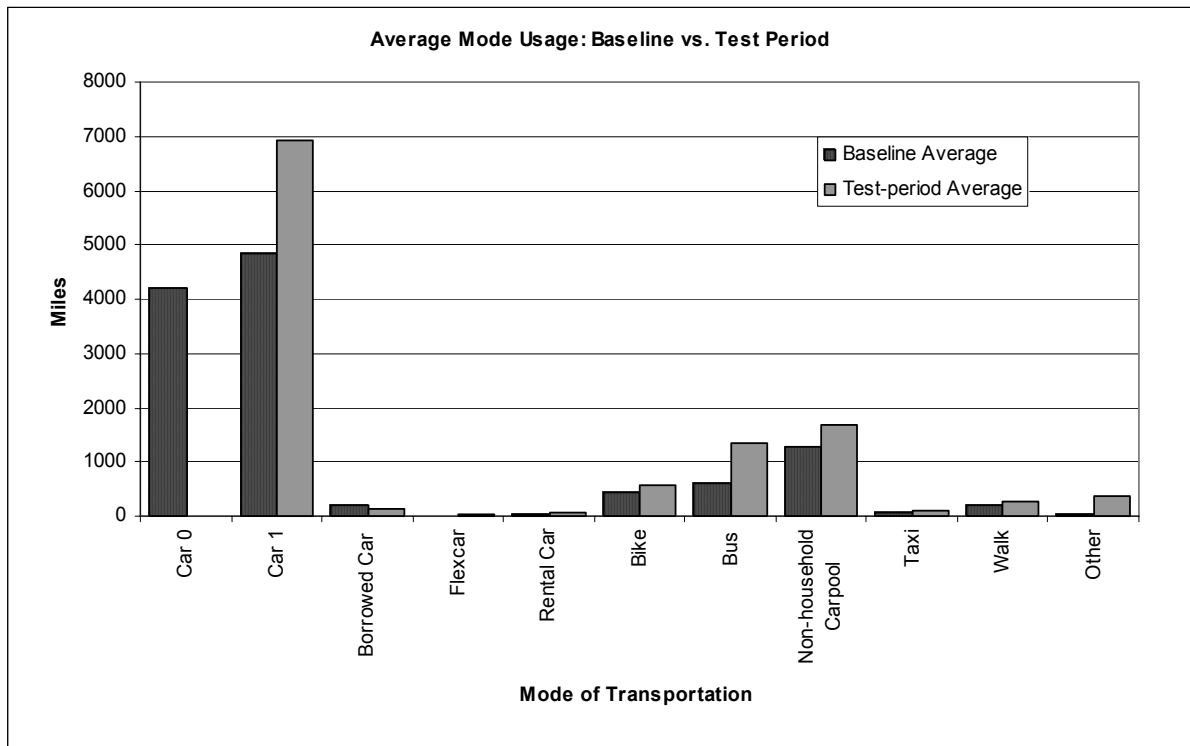
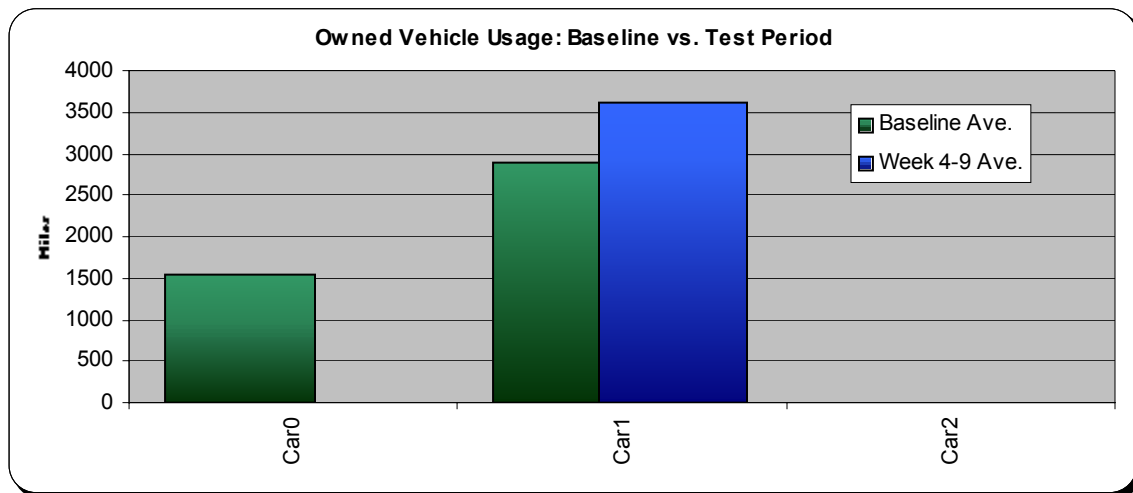


Figure 16: All Mode Usage, Baseline vs. Test Period

Figure 16 provides a convenient breakdown of transportation choices and how they changed between the baseline and the test period. Car 0 was driven only in the baseline period; Car 1 was used significantly more in the test period than in the baseline. Buses were also utilized significantly more in the test period. Most other modes of transportation also were utilized slightly more in the test period, the only exception being borrowed cars, which were actually used a slight amount less in the test period than in the baseline.

2001 Average Mode Usage: Baseline vs. Test Period, Owned Vehicles



***Figure 15: Average Mode Usage: Baseline vs. Test Period,
(Owned Vehicles - All Participants)***

Figure 15 compares the average weekly miles traveled for owned vehicles only during the baseline period and the test period.

2002 Average Mode Usage: Baseline vs. Test Period, Owned Vehicles

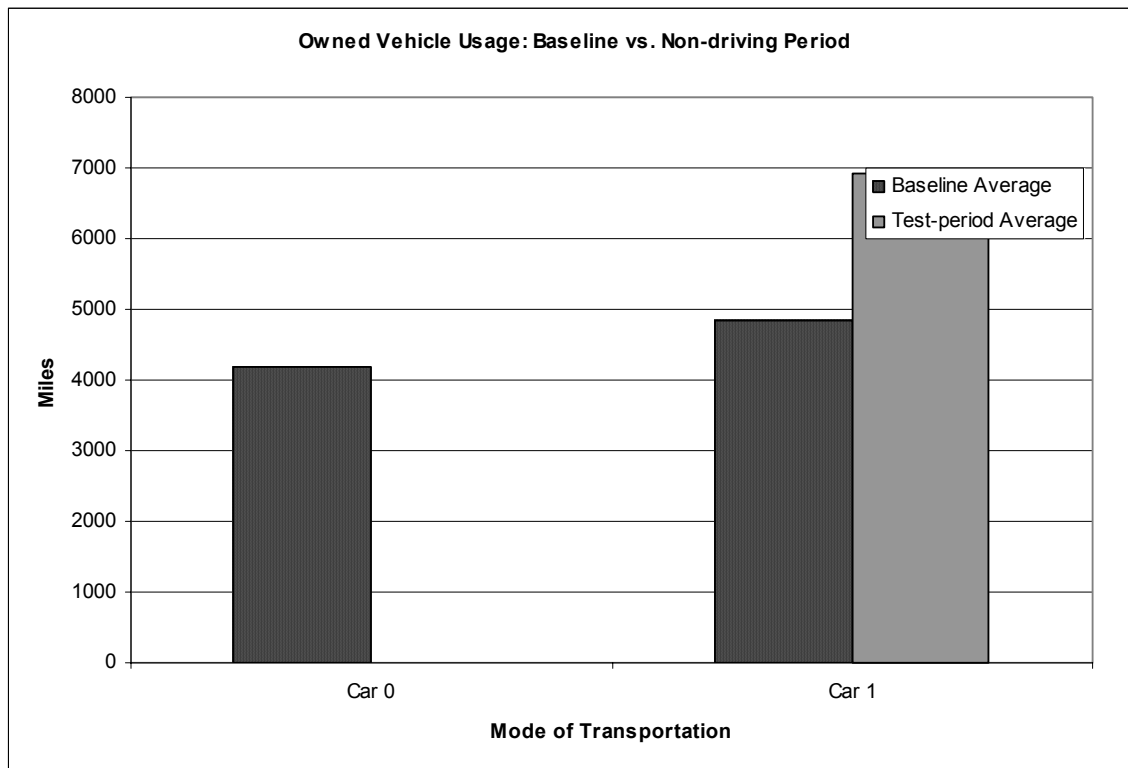
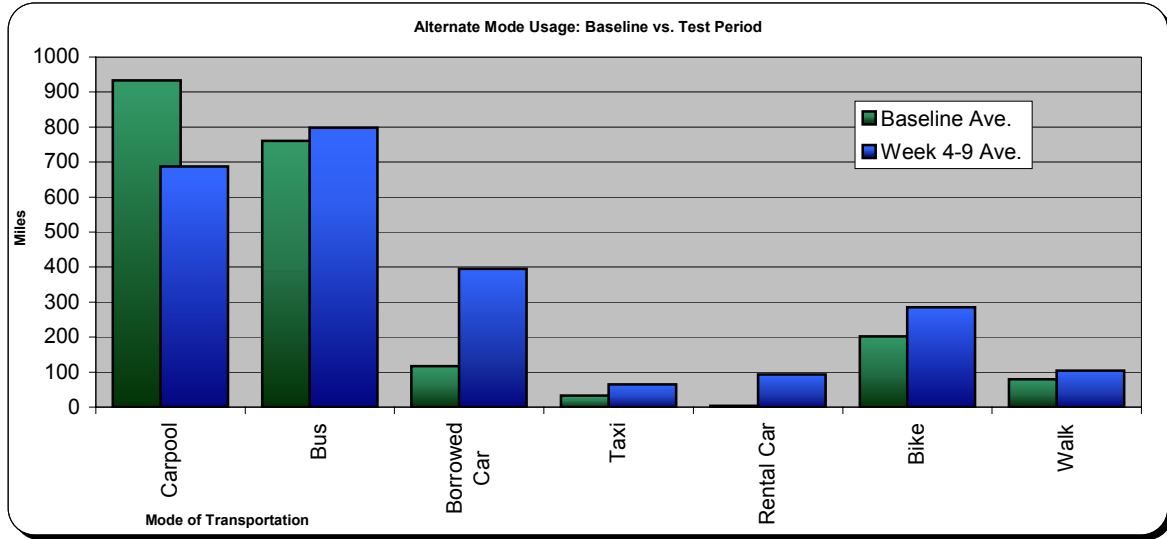


Figure 17: Owned-Vehicle Usage, Baseline vs. Test Period

Figure 17 offers a closer look at owned-vehicle usage in the baseline and test periods.

2001 Average Mode Usage: Baseline vs. Test Period, Alternate Modes



***Figure 16: Average Mode Usage: Baseline vs. Test Period,
(Alternate Modes - All Participants)***

Since the use of owned vehicles tends to overwhelm the data bars for alternative modes of transportation in Figure 14, Figure 16 compares the average weekly miles traveled for only the alternate transportation modes during the baseline period and the test period. Every form of transportation was used more once the participants gave up one of their cars, with the exception of carpool travel (reasons why noted under Figure 6).

2002 Average Mode Usage: Baseline vs. Test Period, Alternate Modes

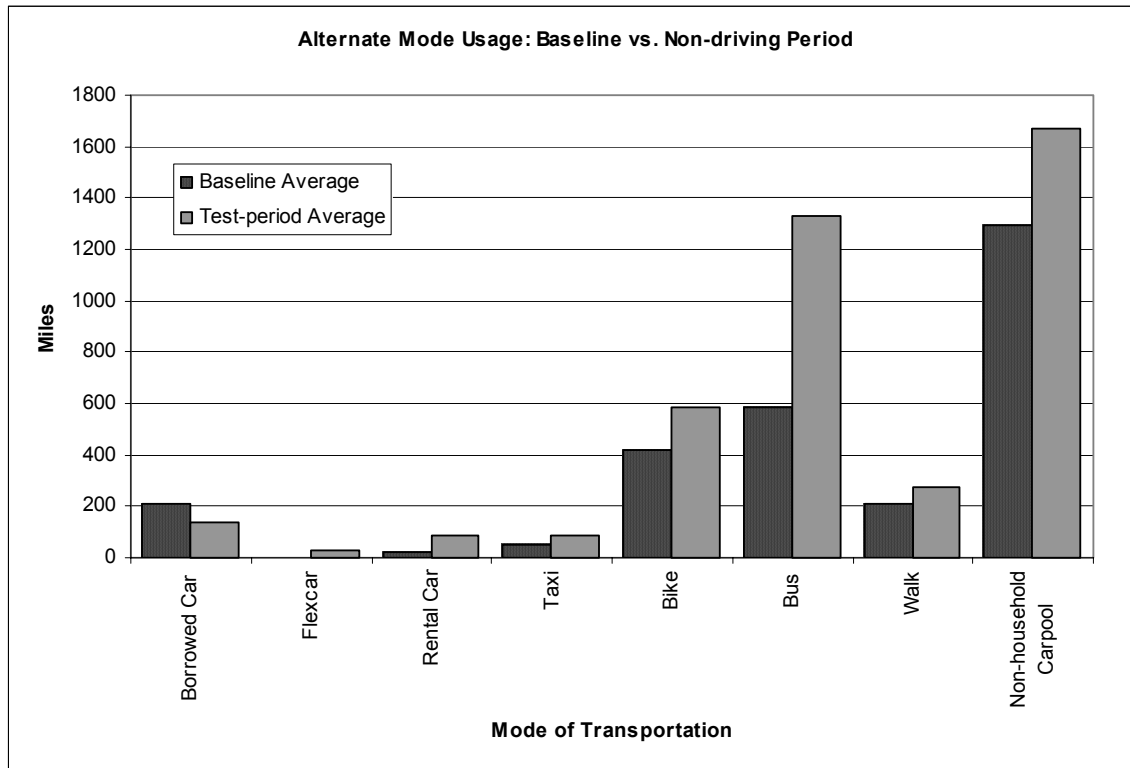


Figure 18: Alternate Mode Usage, Baseline vs. Test Period

Here we see the dramatic increase in bus usage in the test period, along with the more modest increases in formal carpool usage (Non-Household Carpool) and bicycling. It is also interesting to note that borrowed-car usage dropped in the test period, even though the participants had one fewer car during that period. Because of the relatively minimal mileage of this mode, this again shows how the decisions of one or two households greatly influence the total trend.

Note about the charts on the following pages:

The charts in the 2002 Report on Results had a different layout than in the 2001 Report in Results. In this Comparison Report we have chosen to show the 2002 charts in the same layout as in as in the 2001 Report on Results.

The difference between the layouts is that the 2001 version showed the charts for both Baseline and Test Periods of the *Same Places, Different Ways* group on the same page (Figure 23 in the 2001 Report), and then showed the charts for both Baseline and Test Periods of *All Participants* on the same page (Figure 24 in the 2001 Report).

The 2002 version showed the charts for the Baseline Period of both *the Same Places, Different Ways* group on the same page as that of the of *All Participants* (Figure 25 in the 2002 Report), and then showed the charts for the Test Period both the *Same Places, Different Ways* group on the same page as that of the of *All Participants* (Figure 26 in the 2002 Report).

2001 Same Places, Different Ways - Baseline vs. Test Period

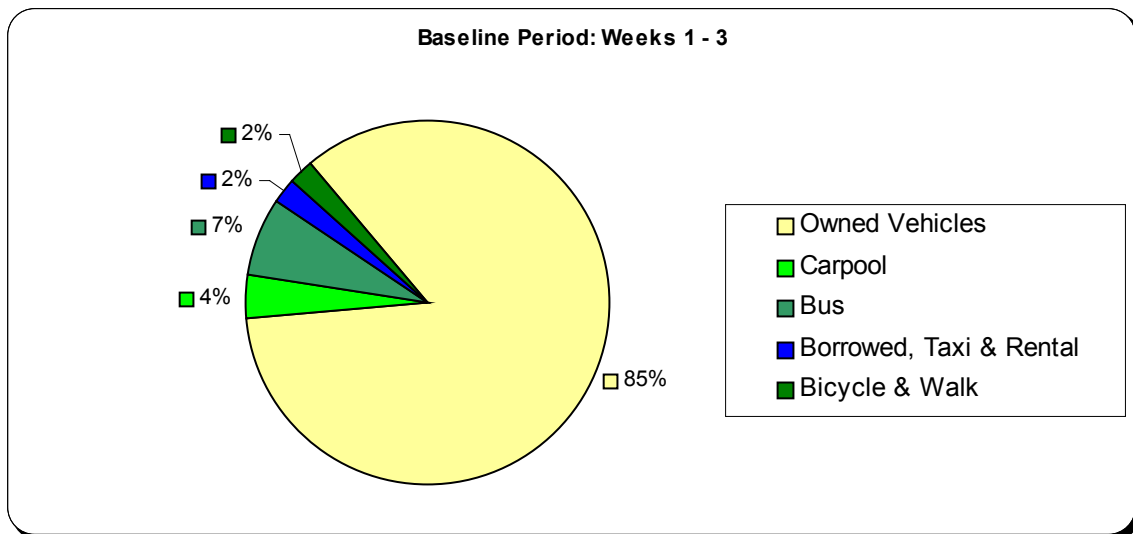


Figure 23: Transportation Modes Used During Baseline Period
(4 Participants who 'Went the Same Places Different Ways')

Based on total miles traveled during the period using the described modes of transportation.

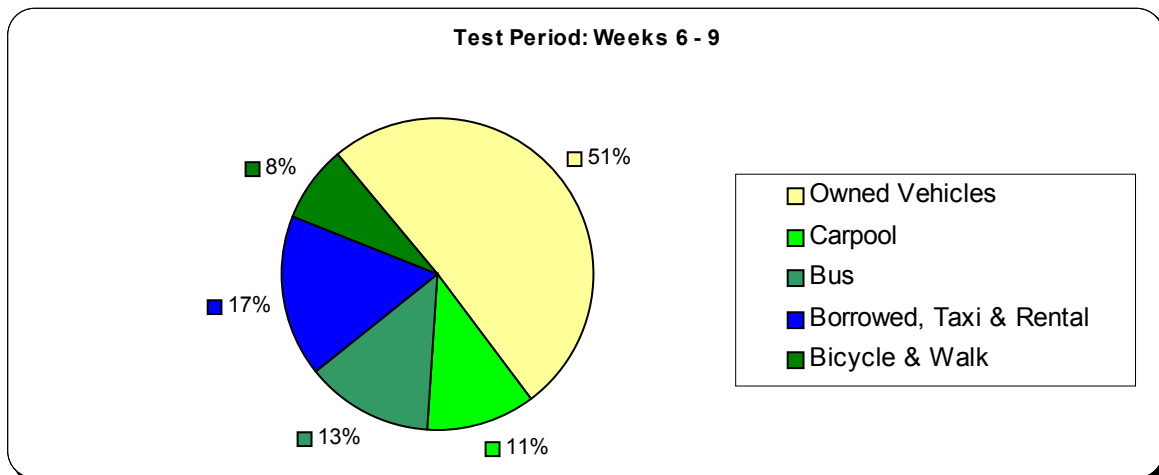
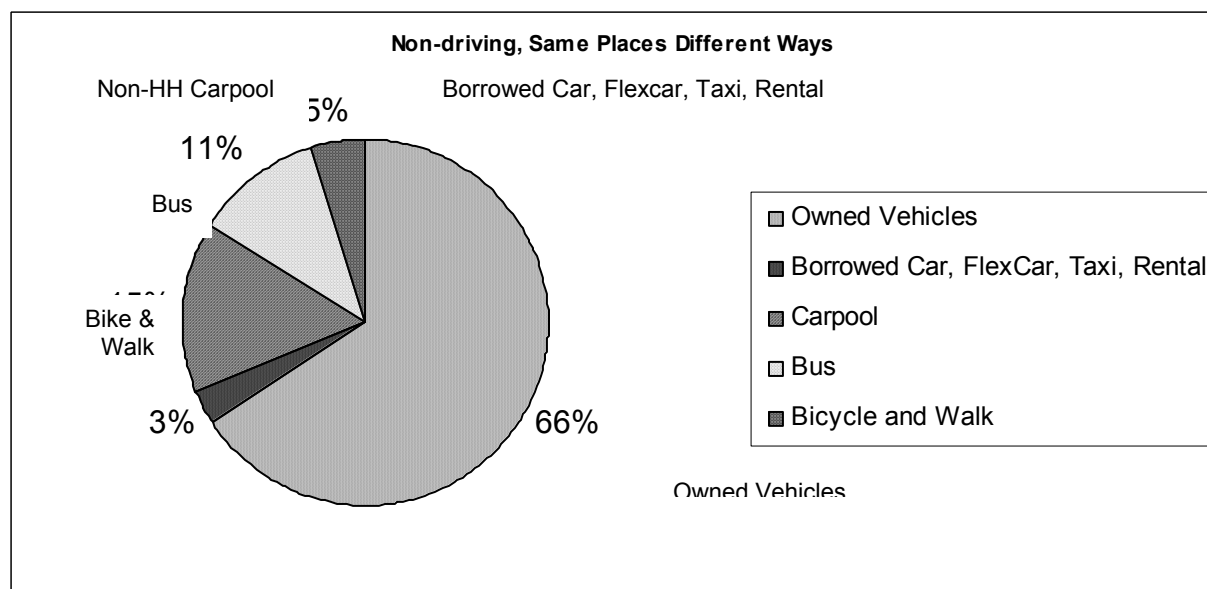
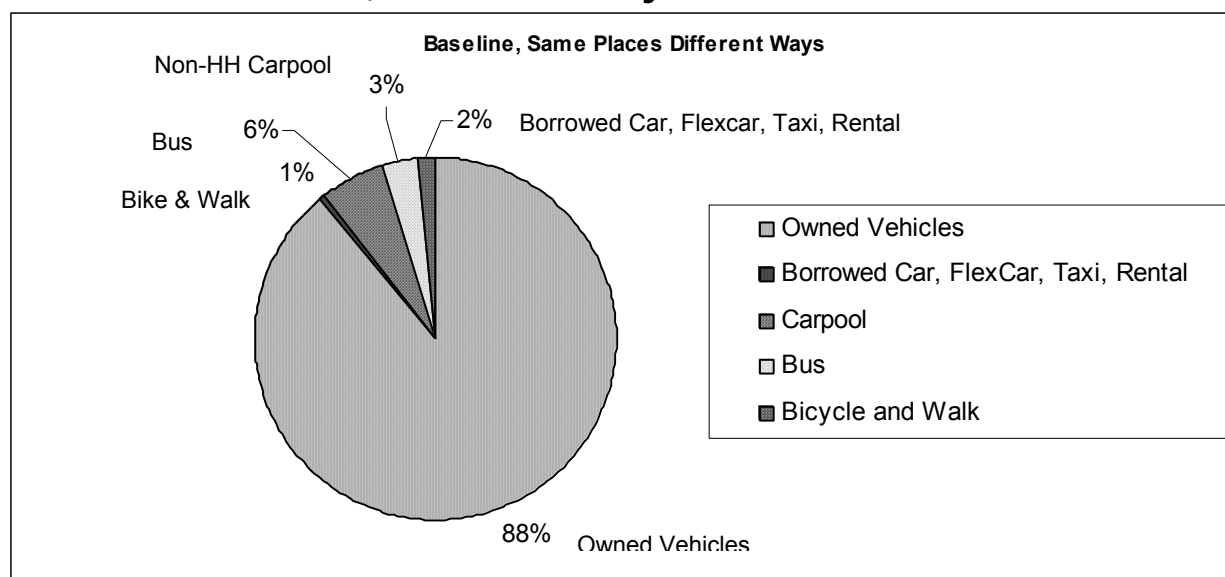


Figure 24: Transportation Modes Used During Test Period

(4 Participants who 'Went the Same Places Different Ways')

Based on total miles traveled during the period using the described modes of transportation.

2002 Same Places, Different Ways - Baseline vs. Test Period



(See note on page XXX)

The participants who traveled the "same places different ways" used vehicles other than their owned vehicles about half as much in the baseline period as the total participant pool. But while their total usage of alternative vehicles was less, the "same places different ways" participants used alternative vehicles in about the same proportions as the participants as a whole during the baseline.

The test-period (non-driving) choices of the "same places different ways" participants were remarkably similar to those of the total participant pool, with the same relative increase in bus utilization. The fact that the "same places different ways" participants used their owned-vehicles so much in the baseline period indicates that removing Car 0 strongly shifts participants' choice of transportation mode to alternative modes.

2001 All Participants - Baseline vs. Test Period

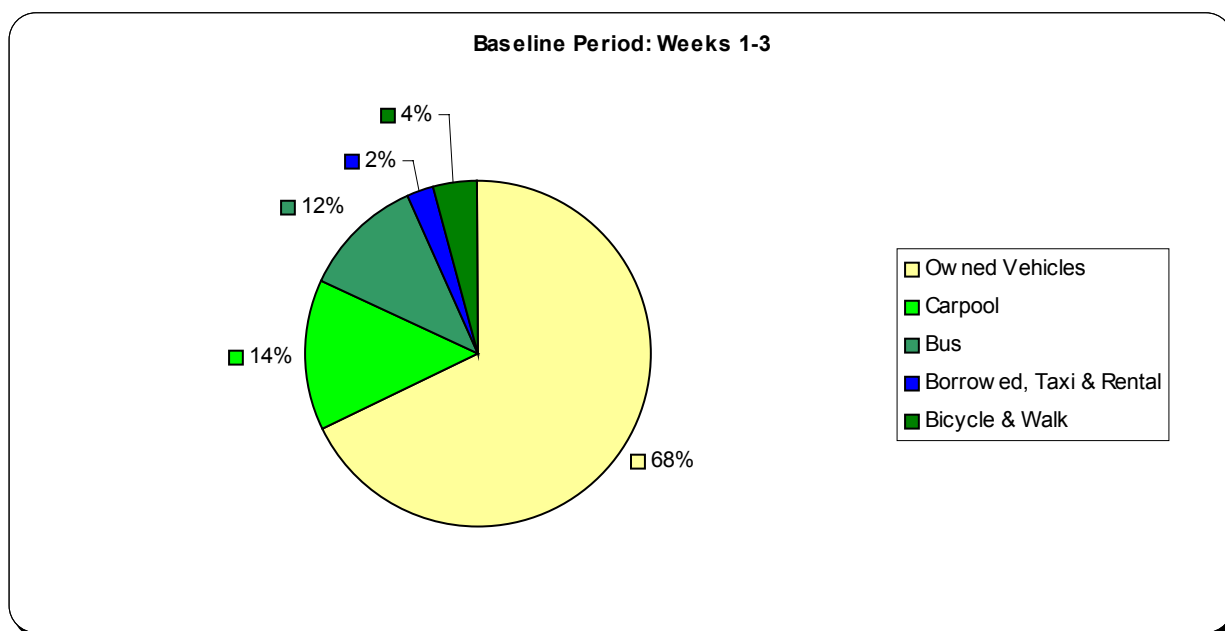


Figure 25: Transportation Modes Used During Baseline Period (All Participants)

Figure 25 describes the transportation mode choices made by all study participants during the baseline period. The data is based on total miles traveled during the period using the described modes of transportation.

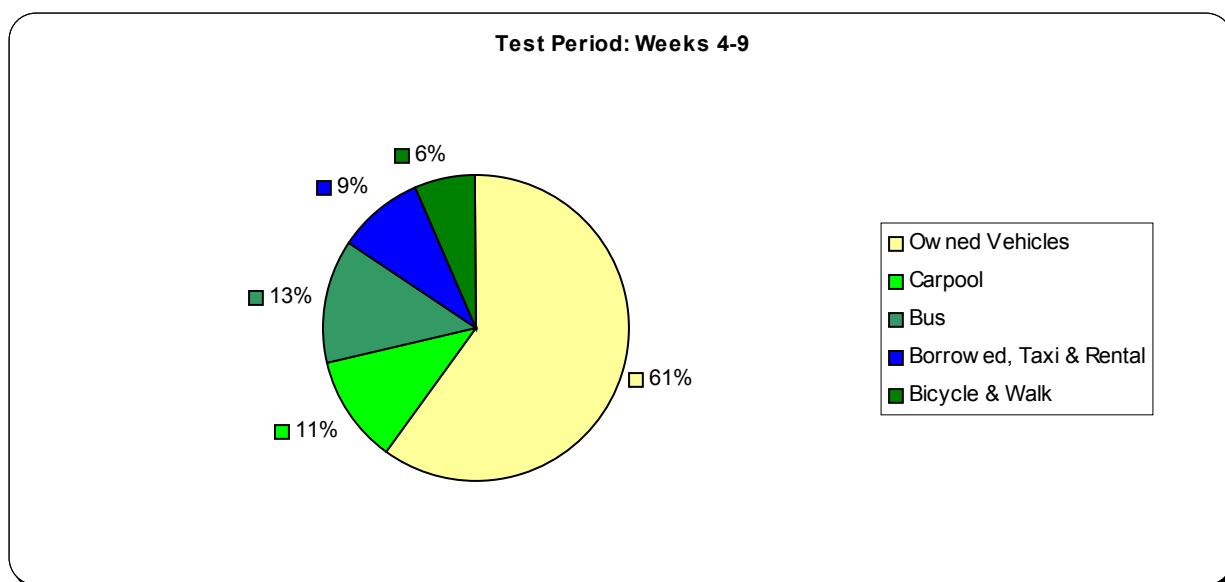
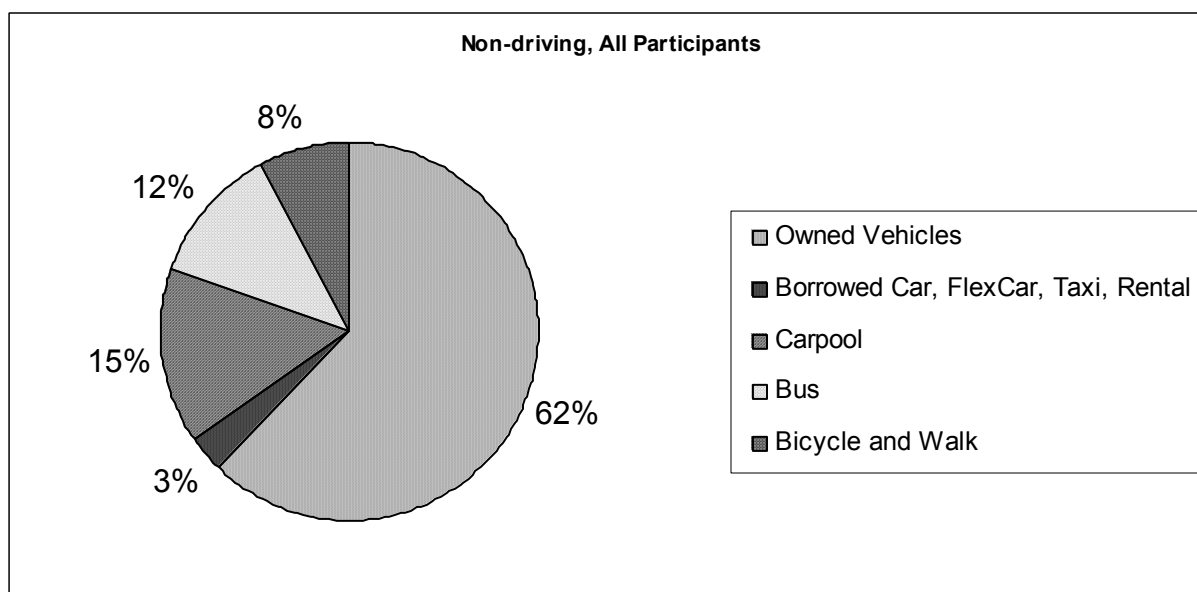
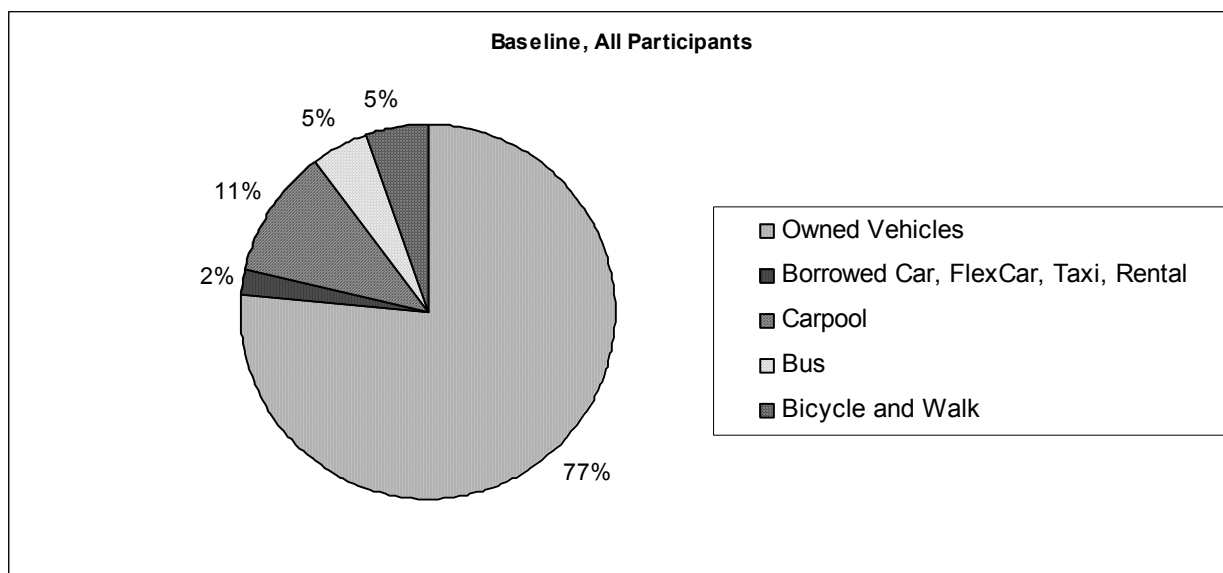


Figure 26: Transportation Modes Used During Test Period (All Participants)

Figure 26 describes the transportation mode choices made by all study participants during the test period. The data is based on total miles traveled during the period using the described modes of transportation.

2002 All Participants - Baseline vs. Test Period



(See note on page XXX)

The participants who traveled the “same places different ways” used vehicles other than their owned vehicles about half as much in the baseline period as the total participant pool. But while their total usage of alternative vehicles was less, the “same places different ways” participants used alternative vehicles in about the same proportions as the participants as a whole during the baseline.

The test-period (non-driving) choices of the “same places different ways” participants were remarkably similar to those of the total participant pool, with the same relative increase in bus utilization. The fact that the “same places different ways” participants used their owned-vehicles so much in the baseline period indicates that removing Car 0 strongly shifts participants’ *choice* of transportation mode to alternative modes.

